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## Dickinson County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

A total of 17 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Dickinson County economy.<sup>1</sup> These 17 sectors have a total direct output of approximately \$578 million and support 1,929.5 jobs in Dickinson County. Running the model for all 17 sectors simultaneously produces the following results:

#### Agriculture Contribution in Dickinson County

Impact Type <sup>2</sup>	Employment	% of Total Employment	Total Value Added <sup>3</sup>	% of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	% of Gross Regional Product
Direct Effect	1,929.5	20%	\$161,375,271	25%	\$577,938,109	91%
Indirect Effect	664.5	7%	\$49,729,511	8%	\$93,428,599	15%
Induced Effect	329.9	3%	\$22,074,289	3%	\$38,832,979	6%
Total Effect	2,923.9	31%	\$233,179,071	37%	\$710,199,688	111%

As shown in the above table, agriculture, food, and food processing supports 2,923.9 jobs, or 31% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$710 million, roughly 111% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 17 agriculture, food, and food processing sectors is approximately \$233 million, or 37% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 37% of the total economy.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:  
[https://implan.com/index.php?option=com\\_content&view=category&id=19](https://implan.com/index.php?option=com_content&view=category&id=19)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value Added = Labor Income + Indirect Business Taxes + Other Property Type Income

<sup>4</sup> GRP = Final Demand of Households + Governments Expenditures + Capital + Exports - Imports - Institutional Sales

<sup>5</sup> Output = Intermediate Inputs + Value Added

In the top ten by employment, Confectionery manufacturing from purchased chocolate is the top employer in the agriculture industry with 734.5 employees. This table also shows the amount of jobs that are created by the agriculture industry in Dickinson County.

#### Top 10 Industries Affected by Employment

Sector Description:	Total Employment	Total Output
Confectionery manufacturing from purchased chocolate .....	734.5	\$253,813,060
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	401.6	\$80,113,194
All other crop farming .....	223.3	\$21,817,225
Grain farming .....	208.8	\$56,290,139
Support activities for agriculture and forestry .....	169.5	\$9,460,521
Wholesale trade .....	116.4	\$23,555,060
Dairy cattle and milk production .....	84.5	\$12,121,014
Truck transportation .....	81.3	\$11,077,591
Management of companies and enterprises .....	63.1	\$11,392,230
Farm machinery and equipment manufacturing .....	56.9	\$34,214,571

The Confectionery manufacturing from purchased chocolate industry directly contributes approximately \$254 million to Dickinson County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

#### Top 10 Industries Affected by Output

Sector Description:	Total Employment	Total Output
Confectionery manufacturing from purchased chocolate .....	734.5	\$253,813,060
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming .....	401.6	\$80,113,194
Grain farming .....	208.8	\$56,290,139
Other animal food manufacturing .....	33.5	\$49,594,857
Flour milling .....	22.7	\$34,799,692
Farm machinery and equipment manufacturing .....	56.9	\$34,214,571
Oilseed farming .....	15.0	\$24,988,337
Wholesale trade .....	116.4	\$23,555,060
All other crop farming .....	223.3	\$21,817,225
Dairy cattle and milk production .....	84.5	\$12,121,014

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Dickinson County's economy.

[illegible]

All 105 counties in Kansas have IMPLAN models with an agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.